



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,812	07/19/2004	Werner Helms	016909-0320	4934

22428 7590 10/11/2006

FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

HARMON, CHRISTOPHER R

ART UNIT PAPER NUMBER

3721

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,812

Applicant(s)

HELMS ET AL.

Examiner

Christopher R. Harmon

Art Unit

3721

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/8/06 has been entered.

Drawings

2. The previous objection to the drawings under 37 CFR 1.83(a) is maintained. The drawings must show every feature of the invention specified in the claims. Even though presented as a method claim, claim 23 recites "applying corrugated heat exchange fins to both flat sides of the tube to form a tube and fin assembly... brazing the tube and fin assembly" (lines 3-5). Such an assembly is not depicted. Therefore, the elements of the fin and tube assembly must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 10-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation "deformable in response to tolerance variations of the at least one web" is indefinite and unclear. It is understood that external forces acting upon the web during manufacturing, standardization, or otherwise may act to deform the surface of the web, however this deformation is not in direct response to the inherent characteristics of the web ie. "tolerance variations" are not dynamic forces acting to deform the surface of the web. Further note: claim limitations should be positively recited in order to provide clarification.

Claim 16 recites the limitation "opposite each web" in the last line. It is uncertain how the first and second embossment are related to 'each' web ie. "at least one" web.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10-15, 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jean Louis (FR#2780153) in view of Applicant's Admitted Prior Art (AAPA).

Jean Louis show a multi-chamber tube which is manufactured from a flat strip with two longitudinal faces 12, 14, two curved narrow faces 16, 18, at least one web which is folded out and which divides adjacent chambers which is soldered to the inner wall 14 with an embossment 34. As best understood, Jean Louis does not show a longitudinal seam as claimed. However the previously made common knowledge

Art Unit: 3721

modification, ie. provision of a longitudinal seam, (see Non-Final Rejection of 8/18/05) is taken to be admitted prior art because applicant failed to traverse the examiner's assertion of official notice.

Regarding claims 11-15, the manner of the embossment in the web is considered a plateau; see figures 1 and 3, the dimensions of which (embossment, web thickness, and tube breadth) are obvious to one of ordinary skill in the art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 22, the invention to Jean Louis is formed of at least one web (flat); the distal ends 20, 22 moved into abutment with the embossment 34 and is considered standardized (note opposing walls are distinctly described as parallel); see figure 3, English abstract.

Regarding claim 23, figure 4 of Jean Louis depicts a heat exchanger assembly comprising heat exchange fins 40 and flat multi-chambered tubes of figure 1. It is uncertain whether or not the tubes and fins are braze-connected, however because brazing is admitted as well known in the art as a form of connecting, it would have been obvious to one of ordinary skill in the art to braze the elements together for the final assembly completion.

7. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jean Louis (FR#2780153) in view of Letrange (US 5,704,423).

Jean Louis does not directly disclose a first and second web, however Letrange teaches a flat tube for a heat exchanger utilizing first 12 and second webs 14. It would have been obvious to one of ordinary skill in the art to include a first and second web as taught by Letrange in the invention to Jean Louis in order to create a flat multi-chambered tube with additional chambers.

Response to Arguments

8. Applicant's arguments filed 5/8/06 have been fully considered but they are not persuasive. The shape of the embossment of Jean Louis is considered a plateau not merely a triangular shape as applicant argues; see figure 3. Furthermore, the argument that the embossment is not "deformable" is not clear. "deformable" is given its ordinary and plain meaning. The grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language such as "deformable" that suggests a capability or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation.

Regarding the claimed dimensions, FR '153 does not show a discontinuous solder junction also note: while features of an apparatus may be recited either structurally or functionally, claims directed towards an apparatus must be distinguished from the prior art in terms of structure rather than function. See *In re Schreiber*, 128 F.3d 1473-78, 44 USPQ2d 1429-32 (Fed.Cir. 1997) and *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed.Cir. 1990).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., functionality of embossment, intended use) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Harmon whose telephone number is (571) 272-4461. The examiner can normally be reached on Monday-Friday from 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on (571) 272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

